

bigness of the Sea-Salt made by Fire ; but ours is of the size of a Pepper-grain, and of a Cubical shape.

The Marishes are preserv'd from one year to another by overflowing them, so that the water be near a foot high above the Marishes.

There are Marishes, that are not separated from the Sea but by a ditch of 20. or 30. foot large : others are further distant, receiving the Water by Channels, that are made according to the Scituation of the Marishes. To preserve this Ditch, it is strengthened with stones from the foot to the top, as we use to pave streets.

The Timber of the Marishes, if it be of good Oak, keeps near thirty years, but there is used but little Wood, all the Ditches and Apertures being done with stones.

An Answer

*To some Inquiries concerning the Eruptions of Mount Ætna, An.
1669. Communicated by some Inquisitive English Merchants,
now residing in Sicily.*

Touching the Forerunners of this Fire, there was, for the space of 18. days, before it broke out, a very thick dark sky in those parts, with Thunder and lightning and frequent Concussions of the Earth, which the people make terrible reports of, though I never saw nor heard of any Buildings cast down thereby, save a small town or village, call'd *Nicolosi*, about halfe a mile distant from the New Mouth, and some such other slight Buildings among those Towns, that were after over-run by the Fire. Besides, it was observ'd that the Old top or Mouth of *Ætna* did, for 2. or 3. months before, rage more than usual; the like of which did *Volcan* and *Strombilo*, two Burning Islands to the West-ward. And the top of *Ætna* must about the same time have sunk down into its old *Forago* or hole, in that 'tis agreed by all, that had seen this mountain before, that it was very much lower'd. Other Forerunners of this Fire I have not heard nor met with.

It first broke out on the Eleventh of *March* 669. about two hours before night, and that on the *South-East-side* or skirt of the

the Mountain, about 20. miles beneath the Old Mouth; and 10. miles from *Catania*. At first it was reported to advance 3. miles in 24. hours; but at our being there (*viz.* *April 5*) when we were come within a short mile of *Catania*, it scarce mov'd after the rate of a furlong a day; and after this degree of progress it continued for 15. or 20. days after, passing under the walls of *Catania* a good way into the Sea; but about the latter end of this Month and the beginning of *May* (whether it was that the Sea could not receive this matter fast enough, or rather that the Mouth above did cast forth a larger quantity) it bent all its force against the City; and having wrought itself up even with the Walls thereof, over it pass'd in divers places; but its chief fury fell upon a very stately *Convent*, which was that of the *Benedictins*, having large Gardens and other ground betwixt them and the Wall: Which when it had filled up, it fell with all its force on the *Convent*, where it met with strong resistance, which made it swell (as usually it did, where it met with any Obstruction) almost as high, as the higher Shops in the Old London Exchange, this *Convent* being built much after that fashion, though considerably bigger. Some parts of this Wall were driven in, whole and entire, almost a foot, as appeared by the rising of the tiles in the midst of the floor, and bending of the Iron-barrs that went cross above. And 'tis certain, had this Torrent fallen in some other part of the Town, it would have made great havock amongst their ordinary Buildings, but here its fury ceased the 4. of *May*, running hence forward in little channels or streams, and that chiefly into the Sea. It had overwhelmed in the upland-contry some 14. Towns and villages, whereof some were of good note, containing 3 or 4 thousand Inhabitants, and stood in a very fruitful and pleasant Country, where the Fire had never made any devastation before: but now there is not so much as any sign, where such Towns have stood; only the Church and Steeple of one of them, which stood alone upon an high ground, does still appear.

As to the matter, which thus ran, it was nothing else, but divers kinds of Metals and Minerals, rendred liquid by the fierceness of the Fire in the bowels of the Earth, boiling up and gushing forth, like the water doth at the head of some great River;

River; and having run in a full body for a good Stones cast or more, the extremitities thereof began to crust and curdle, becoming, when cold, those hard porous Stones, which the people call *Sciarri*, having the nearest resemblance to huge Cakes of sea-cole; full of a fierce Fire. These came roling and rumbling over one another, and where they met with a bank, would fill up and swell over, by their weight bearing down any common building, and burning up what was combustible. The chief motion of this matter was forward, but it was also dilating it self, as a Floud of Water would doe on even ground, thrusting out severall Armes, or Tongues, as they call them.

About 2. or 3. of the Clock in the night we mounted an high Tower in *Catania*; whence we had a full view of the Mouth; which was a terrible sight, *viz.* to see so great a mass or body of meer Fire. Next morning we would have gone up to the Mouth itself, but durst not come nearer than a furlong off, for feare of being overwhe'led by a sudden turn of the wind, which carried up into the Air some of that vast pillar of Ashes, which to our apprehension exceeded twice the bigness of *Pauls* Steeple in *London*, and went up in a streight body to a farr greater hight than that; the whole Air being thereabout all cover'd with the lightest of those Ashes blown off from the top of this pillar: And from the first breaking forth of the Fire untill its fury ceased (being 54. days) neither Sun nor Starr were seen in all that part.

From the outside of this pillar fell off great quantity of Stones, but none very bigg, neither could we discern any Fire in them, nor come to see, where that fiery stuff broke out, there being a great bank or hill of Ashes betwixt it and us.

At the Mouth, whence issued the Fire, or Ashes, or both, was a continual noise, like the beating of great waves of the Sea against Rocks, or like thunder a farr off, which sometimes I have heard here in *Messina*, though situated at the foot of high hills and 60. miles off. It hath also been heard 100. miles Nordward of this place, in *Calabria* (as I have been credibly informed,) whither the Ashes have also been carried: And some of our seamen have also reported, that their decks were covered therewith at *Zant*, though its likely not very thick,

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Of those Burnt Stones or *Sciarri*, I have some by me of divers qualities, and shall procure what more I can, to be sent by the first passage.

About the middle of *May* we made another Journey thither, where we found the face of things much altered, the City of *Catania* being three quarters of it compassed round with these *Sciarri*, as high as the top of the Walls; and in many places it had broke over. The first night of our arrival a new streame or gutter of Fire broke forth among some *Sciarri*, which we were walking upon an hour or two before, and they were as high as to be even with the top of the Wall. It powred itself down into the City in a small gutter of about 3. foot broad, and 9. foot long of meer Fire, the extremities still falling off into those *Sciarri*; but this streame was extinct by the next morning, though it had filled up a great void place with its *Sciarri*. The next night was another much bigger Channel discovered, pouring itself over another part of the Wall into the Castle-ditch, which continued (as we were informed) some days after our departure. Divers of those smal Rivolets did run at the same time into the Sea, and it does so still at this very day, though faintly.

It was observed, that those streams of Fire never grew broader nor visibly longer, nor moved out of the place, they were seen in; which put us a little more to examine their working, and we did conclude, that not only then, but in the fury also of its running, it made it self certain crufted gutters to run in, to keep it self, as 'twere from the Air, which by degrees did cool and fix it, as more plainly appear'd above at the Mouth, where, the first time of our going thither, we found the *Sciarri* generally thus coold and fixt. And hence also it might proceed, that these live *Sciarri*, meeting with any bank or high ground, would puff and swell up, till they had overcome it; so that in many places, especially under the Walls of *Catania*, were Vallys of those *Sciarri*, and the Fire never brok forth, or discovered it self in those streams, until it had gain'd its hight; for those rivolets ever went declining.

Having spent a couple of days about *Catania*, we again went up to the Mouth, where now without any danger of Fire

of Ashes we could take a free view both of the old and new Channel of the Fire, and of that great mountain of Ashes cast up. That, which we guessed to be the old bed or channel, was a three-corner'd plot of about 2. Acres, with a crust of *Sciarri* at the bottom, and upon that a smal crust or surface of Brimstone. It was hedg'd in on each side with a great bank or hill of Ashes, and behind and at the upper end rose up that huge mountain of the same matter. Between those two banks the Fire seems to have had its passage. At the upper end in the nook upon a little hillock of crusted *Sciarri* was an hole about 10. foot wide, whence 'tis probable the Fire issued; and it might have had several other such holes, since either crusted over or covered with ashes. At the bottom of this hole the Fire was seen to flow along, and below it was a channel of fire, beneath that surface of *Sciarri*, which being cleft a top for some space, we had an easy and leisurable view of the metal flowing along, whose superficies might be a yard broad, though possibly it carried a greater breadth underneath, the gutter going sloping. What depth it had, we could not guess: it was impenetrable by Iron hooks and other Instruments we had. We were very desirous to have got some of this matter at the Spring head, but we could penetrate no more into it, then with ones finger into the palme of the hand. 'Tis likely, that some running may have been more yielding, than we found this. From this channel, but especially from that hole above it, issued great store of a strong sulfureous smoak, wherewith some of our company were at first almost stifled through inadvertency. About once in a quarter of an hour there would rise a pillar of smoak or ashes, but nothing comparable to the former; which seem'd to come from the middle top of that new made Mountain. I confess, it was an omission in us, not to goe up to this mountain, being so near; but because it was troublesome and not without danger, the rest of the company being satisfied with what they had already seen, would not stay to see any more.

At this our last being at *Catania* we found the people busy in barricading the ends of some streets and passages, where they thought the fire might break in; and this they did by pulling down the old houses thereabout, and laying up the loose stones

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in manner of a wall, which they said would resist the fire as not-being mixt with lime; though it was the great weight and force of that fiery matter in pressing forward, and not its burning, that overthrew the buildings, as plainly appeared in the Convent of the *Benedictins*, and in the Town-wals, where the great deluge of Fire did pour it self; it not breaking into the City, but pouring it self over the wals, as hath been said.

Unto this very time 'tis said to have run a mile into the Sea, and as much in front, though it was much less, when we were there. The shore goes gently declining, having at the extremity of the *Sciarri* about 5. fathoms, and about half as much they are above water.

The superficies of the water, for 20. foot or more of those rivulets of fire, was hotter than to endure on's hand in it, though deeper it was more temperate, and those live *Sciarri* still retain'd their fire under water, as we saw, when the Surges of the Sea retreated back in their ordinary reverberations.

The general face of these *Sciarri* is in some respect not much unlike, from the beginning to the end, to the river of *Thames* in a great frost at the top of the Ice above bridg; I mean, lying after such a rugg'd manner in great flakes: but its color is quite different, being most of a dark dusky blew, and some stones or rocks of a vast bigness, close and solid.

But notwithstanding their ruggedness, and stre of fire, which we could see glowing in the clefts and cavaties, we made a shift to ramble over a good part of them; as 'tis said also, that people would doe the same in its greatest violence of burning. For as those live *Sciarri*, and those Rivers of fire themselves were so tough and impenetrable as to bear any weight, so the superficies of the *Sciarri* might be toucht and handled, the fire being inward, and not to be discerned but near hand, especially in the day time: And 'twas somewhat a strange sight to see so great a River come so tamely forward; for, as it approached unto any house, they not only at good leisure removed their goods, but the very tiles, and beams, and what else was moveable.

'Tis observable, that none of those, that went to see it, when there was little else to be seen but the cold *Sciari*, but declared

to have found it a much other thing, than they imagined, though related to them *viva voce* by those who had formerly been there.

I shall add, that the whole country from the very Walls of *Catania* to 20. miles on this side is full of those old *Sciarri*, which former Eruptions have cast forth, though the people remember none so bigg as this last, or that burst out so low. This Country is notwithstanding well cultivated and inhabited; for length of time hath either mollified much of those old *Sciarri*, or new mould or ashes have overgrown them; though there still remains much Country, which, it may be, will never be made serviceable.

What is the perpendicular hight of this Mountain, I cannot learn. It cannot perhaps be rightly taken, being so subject to alter its height and shape. But it is a very goodly Mountain to look upon, as one passes by Sea to the East-ward, standing alone by it self, rising from the very shore; and at shortest passage is reckoned 20. miles up to the top, though from *Catania* it hath 30. miles, as before.

An account of two Books

I. *DISCOURS de M. STENON sur L' ANATOMIE du CERVEAU.* A Paris 1669. in 12.

IN the beginning of this Discourse the Author represents, that those, who search after solid knowledge, will find nothing satisfactory in all that hath been hitherto written concerning the *Brain*: that all, which Anatomists agree in, is only, that it consists of two Substances, a White and a Grayish, and that the former is continued with the Nerves, that are distributed through the whole Body; and the latter serves in some places for a kind of *Cortex* to the *White*, and in others, severs the white filaments from one another. But that they are yet ignorant, what those substances are; in what manner the Nerves are Joyned in the *White*; and how far their extremities advance in it; from which disposition yet depends all the diversity and variety of our sensations and motions. And as for the *Ventricles* or Cavities of the Brain, he affirms them to be no less unknown, than its Substance; some Anatomists lodg-

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